

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

<b>Date of mailing</b> (day/month/year) 02 May 2001 (02.05.01)	
<b>International application No.</b> PCT/GB00/03045	<b>Applicant's or agent's file reference</b> 9920098 M
<b>International filing date</b> (day/month/year) 07 August 2000 (07.08.00)	<b>Priority date</b> (day/month/year) 26 August 1999 (26.08.99)
<b>Applicant</b> COLLINS, Michael, Norman	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
 31 January 2001 (31.01.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	<b>Authorized officer</b> Juan Cruz Telephone No.: (41-22) 338.83.38
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## PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

To:

FLINT, Jonathan, McNeill  
765 Finchley Road  
London NW11 8DS  
ROYAUME-UNI

<b>Date of mailing</b> (day/month/year) 11 April 2001 (11.04.01)	<b>IMPORTANT NOTIFICATION</b>
<b>Applicant's or agent's file reference</b> 9920098 M	
<b>International application No.</b> PCT/GB00/03045	<b>International filing date</b> (day/month/year) 07 August 2000 (07.08.00)

## 1. The following indications appeared on record concerning:

☒ the applicant
                 
 ☐ the inventor
                 
 ☐ the agent
                 
 ☐ the common representative

<b>Name and Address</b> SMITHS INDUSTRIES PUBLIC LIMITED COMPANY 765 Finchley Road London NW11 8DS United Kingdom	<b>State of Nationality</b> GB	<b>State of Residence</b> GB
	<b>Telephone No.</b>	
	<b>Facsimile No.</b>	
	<b>Teleprinter No.</b>	

## 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person
                 
 ☒ the name
                 
 ☐ the address
                 
 ☐ the nationality
                 
 ☐ the residence

<b>Name and Address</b> SMITHS GROUP PLC 765 Finchley Road London NW11 8DS United Kingdom	<b>State of Nationality</b> GB	<b>State of Residence</b> GB
	<b>Telephone No.</b>	
	<b>Facsimile No.</b>	
	<b>Teleprinter No.</b>	

## 3. Further observations, if necessary:

## 4. A copy of this notification has been sent to:

<input checked="" type="checkbox"/> the receiving Office	<input checked="" type="checkbox"/> the designated Offices concerned
<input type="checkbox"/> the International Searching Authority	<input type="checkbox"/> the elected Offices concerned
<input type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No.: (41-22) 740.14.35	<b>Authorized officer</b>  R. Raissi  Telephone No.: (41-22) 338.83.38
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## PATENT COOPERATION TREATY


## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 24 APR 2001

WIPO PCT

Applicant's or agent's file reference 9920098 M		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB00/03045	International filing date (day/month/year) 07/08/2000	Priority date (day/month/year) 26/08/1999	
International Patent Classification (IPC) or national classification and IPC A61M16/04			
Applicant [SMITHS INDUSTRIES PUBLIC LIMITED COMPANY et al.] SMITHS GROUP PLC.			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 8 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input checked="" type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input checked="" type="checkbox"/> Certain documents cited</p> <p>VII <input checked="" type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>			
Date of submission of the demand  31/01/2001		Date of completion of this report  20.04.2001	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized officer  Schmierer, U  Telephone No. +49 89 2399 2603	



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/03045

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*):

### Description, pages:

1-6 as originally filed

### Claims, No.:

1-10 as originally filed

### Drawings, sheets:

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/03045

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**IV. Lack of unity of invention**

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.  
☐ paid additional fees.  
☐ paid additional fees under protest.  
☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.  
☒ not complied with for the following reasons:  
**see separate sheet**

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.  
☐ the parts relating to claims Nos. .

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes:	Claims	1-10
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-10
	No:	Claims	

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/03045

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Industrial applicability (IA)    Yes:    Claims    1-10  
   No:    Claims

2. Citations and explanations  
**see separate sheet**

**VI.      Certain documents cited**

1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/03045

**Re Item IV**

**Lack of unity of invention**

According to claim 1, the invention is characterised by the location of the tubular portion, whereas according to independent apparatus claim 7, the invention lies in the relationship between height of the recess and internal diameter of the tubular portion. Finally, independent apparatus claim 7 refers to the ratio of the internal diameter of the tubular portion cubed to the volume of the recess. Therefore, above said claims refer to different inventions which may not be considered being so linked as to form a single general inventive concept (Rule 13.1 PCT).

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

(1) Reference is made to the following document:

D1 = GB-A-2 321 854

(2) D1, which document is considered representing the closest state of the art, refers to a laryngeal mask airway from which the laryngeal mask airway according to claim 1 differs by the patient end of the tubular portion located rear to the rear side of the opening.

(3) The problem of the present invention is to provide a laryngeal mask airway having a reduced risk to block the air passage along the mask by the epiglottis during insertion.

(4) The inventive solution according to claim 1 lies in the arrangement of the patient end of the tubular portion rear to the rear side of the opening.

(4.1) Said solution is not made obvious by D1, where the said patient end lies within the opening (see fig.1 of D1).

(5) According to independent apparatus claims 7 and 9, the respective solutions lie in a ratio of particular geometric sizes. Said ratios neither are made obvious nor can be derived from the documents cited in the International Search Report.

(6) Said documents are:

US RE35531E refers to a laryngeal mask by which the epiglottis is blocked during insertion.

GB-A-2 323 289 and EP-A-935 971: Patient end of the tubular portion above and inside the opening.



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/03045

**Re Item VI**

**Certain documents cited**

Certain published documents (Rule 70.10)

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO-A-0020062	13/04/2000	06/10/1999	06/10/98

Neither the validity of the priority claim of the present application nor of the document cited above has been checked.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/03045

**Re Item VII**

**Certain defects in the international application**

D1 refers to a laryngeal mask according to the features of the preamble of claim 1, and, in addition, to the location of the patient end of the tubular portion above the opening. Last said feature should have been transmitted to the preamble in order to comply with Rule 6.3b PCT.

In independent apparatus claim 9, the volume of the recess should have been defined in accordance with the description p.4 l.14 to 17 (Art. 6 PCT).

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

## PCT

### NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Rule 71.1)

To:

FLINT, Jonathan McNeill  
765 Finchley Road  
LONDON NW11 8DS  
GRANDE BRETAGNE

Date of mailing  
(day/month/year) 20.04.2001

Applicant's or agent's file reference  
9920098 M

#### IMPORTANT NOTIFICATION

International application No.  
PCT/GB00/03045

International filing date (day/month/year)  
07/08/2000

Priority date (day/month/year)  
26/08/1999

Applicant  
SMITHS INDUSTRIES PUBLIC LIMITED COMPANY et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized officer

Terzic, K

Tel. +49 89 2399-2052



99200981

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>9920098 M</b>	<div style="display: flex; justify-content: space-between;"> <div> <b>FOR FURTHER ACTION</b> </div> <div>           See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)         </div> </div>	
International application No. <b>PCT/GB00/03045</b>	International filing date (day/month/year) <b>07/08/2000</b>	Priority date (day/month/year) <b>26/08/1999</b>
International Patent Classification (IPC) or national classification and IPC <b>A61M16/04</b>		
Applicant <b>SMITHS INDUSTRIES PUBLIC LIMITED COMPANY et al.</b>		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 8 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the report</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input checked="" type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input checked="" type="checkbox"/> Certain documents cited</li> <li>VII <input checked="" type="checkbox"/> Certain defects in the international application</li> <li>VIII <input type="checkbox"/> Certain observations on the international application</li> </ul>		
Date of submission of the demand  <b>31/01/2001</b>	Date of completion of this report  <b>20.04.2001</b>	
Name and mailing address of the international preliminary examining authority:  <div style="display: flex; align-items: center;"> <div>             European Patent Office              D-80298 Munich              Tel. +49 89 2399 - 0 Tx: 523656 epmu d              Fax: +49 89 2399 - 4465           </div> </div>	Authorized officer  <b>Schmierer, U</b>  Telephone No. +49 89 2399 2603	



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/03045

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

**Description, pages:**

1-6 as originally filed

**Claims, No.:**

1-10 as originally filed

**Drawings, sheets:**

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/03045

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

## IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.  
☐ paid additional fees.  
☐ paid additional fees under protest.  
☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.  
☒ not complied with for the following reasons:  
**see separate sheet**

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.  
☐ the parts relating to claims Nos. .

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)                      Yes: Claims 1-10  
   No: Claims

Inventive step (IS)              Yes: Claims 1-10  
   No: Claims

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/03045

Industrial applicability (IA)    Yes:    Claims    1-10  
   No:    Claims

2. Citations and explanations  
**see separate sheet**

**VI.      Certain documents cited**

1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/03045

**Re Item IV**

**Lack of unity of invention**

According to claim 1, the invention is characterised by the location of the tubular portion, whereas according to independent apparatus claim 7, the invention lies in the relationship between height of the recess and internal diameter of the tubular portion. Finally, independent apparatus claim 7 refers to the ratio of the internal diameter of the tubular portion cubed to the volume of the recess. Therefore, above said claims refer to different inventions which may not be considered being so linked as to form a single general inventive concept (Rule 13.1 PCT).



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/03045

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

(1) Reference is made to the following document:

D1 = GB-A-2 321 854

(2) D1, which document is considered representing the closest state of the art, refers to a laryngeal mask airway from which the laryngeal mask airway according to claim 1 differs by the patient end of the tubular portion located rear to the rear side of the opening.

(3) The problem of the present invention is to provide a laryngeal mask airway having a reduced risk to block the air passage along the mask by the epiglottis during insertion.

(4) The inventive solution according to claim 1 lies in the arrangement of the patient end of the tubular portion rear to the rear side of the opening.

(4.1) Said solution is not made obvious by D1, where the said patient end lies within the opening (see fig.1 of D1).

(5) According to independent apparatus claims 7 and 9, the respective solutions lie in a ratio of particular geometric sizes. Said ratios neither are made obvious nor can be derived from the documents cited in the International Search Report.

(6) Said documents are:

US RE35531E refers to a laryngeal mask by which the epiglottis is blocked during insertion.

GB-A-2 323 289 and EP-A-935 971: Patient end of the tubular portion above and inside the opening.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/03045

**Re Item VI**

**Certain documents cited**

Certain published documents (Rule 70.10)

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO-A-0020062	13/04/2000	06/10/1999	06/10/98

Neither the validity of the priority claim of the present application nor of the document cited above has been checked.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

---

International application No. PCT/GB00/03045

**Re Item VII**

**Certain defects in the international application**

D1 refers to a laryngeal mask according to the features of the preamble of claim 1, and, in addition, to the location of the patient end of the tubular portion above the opening. Last said feature should have been transmitted to the preamble in order to comply with Rule 6.3b PCT.

In independent apparatus claim 9, the volume of the recess should have been defined in accordance with the description p.4 l.14 to 17 (Art. 6 PCT).

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
1 March 2001 (01.03.2001)

PCT

(10) International Publication Number  
**WO 01/13980 A1**

(51) International Patent Classification<sup>7</sup>: A61M 16/04

(21) International Application Number: PCT/GB00/03045

(22) International Filing Date: 7 August 2000 (07.08.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
9920098.2 26 August 1999 (26.08.1999) GB

(71) Applicant (for all designated States except US): SMITHS  
INDUSTRIES PUBLIC LIMITED COMPANY  
[GB/GB]; 765 Finchley Road, London NW11 8DS (GB).

(81) Designated States (*national*): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— With international search report.

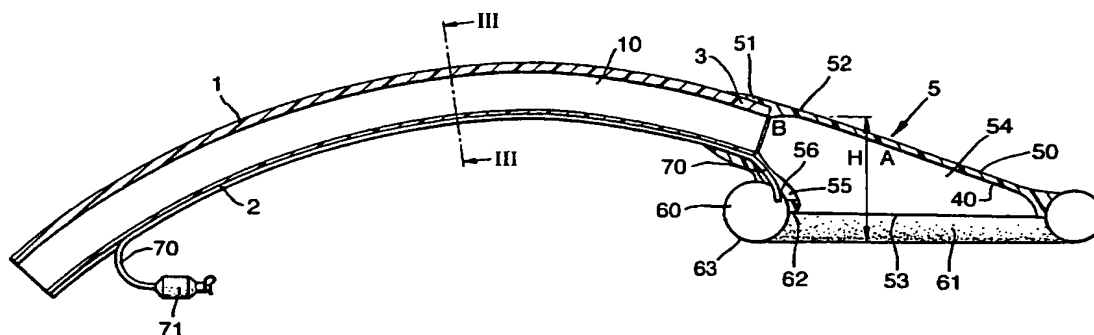
(72) Inventor; and

(75) Inventor/Applicant (for US only): COLLINS, Michael,  
Norman [GB/GB]; Hollydene, Canterbury road, Lyminge,  
Folkestone, Kent CT18 8HD (GB).

(74) Agent: FLINT, Jonathan, McNeill; 765 Finchley Road,  
London NW11 8DS (GB).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

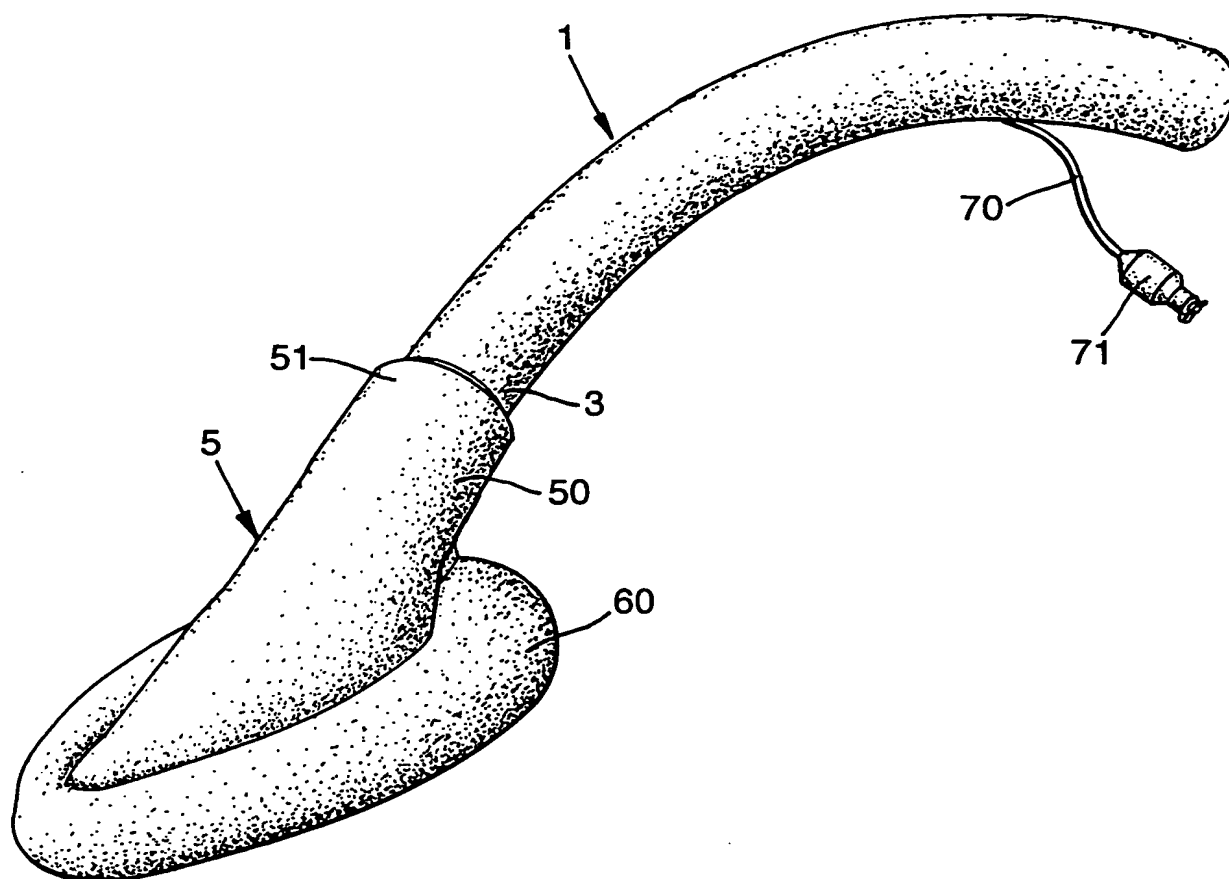
(54) Title: LARYNGEAL MASK AIRWAY

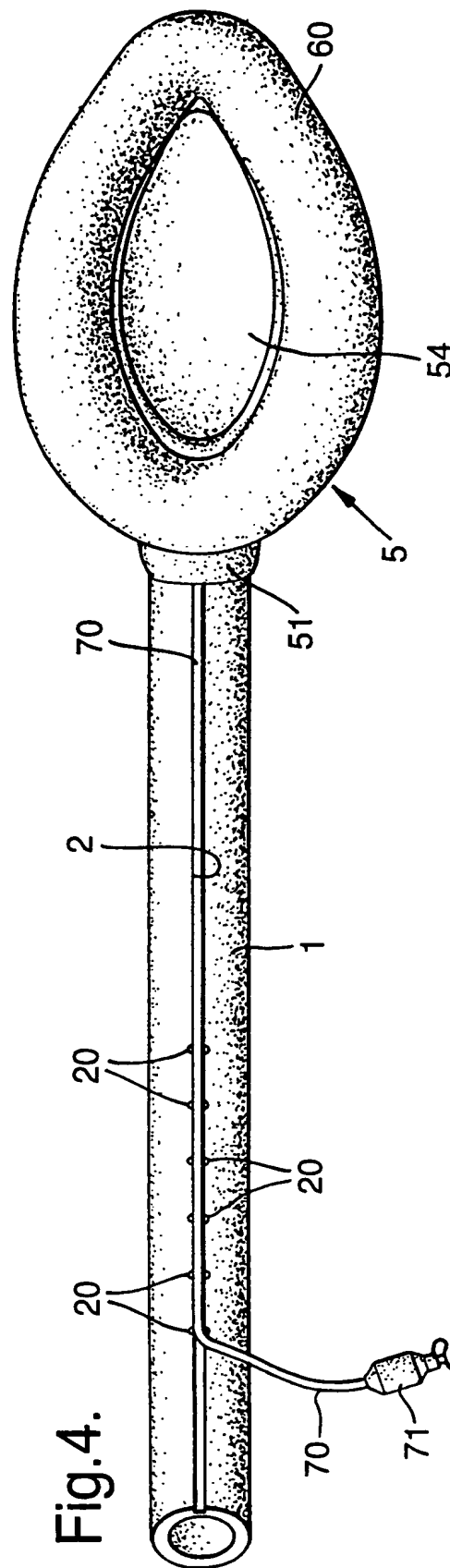
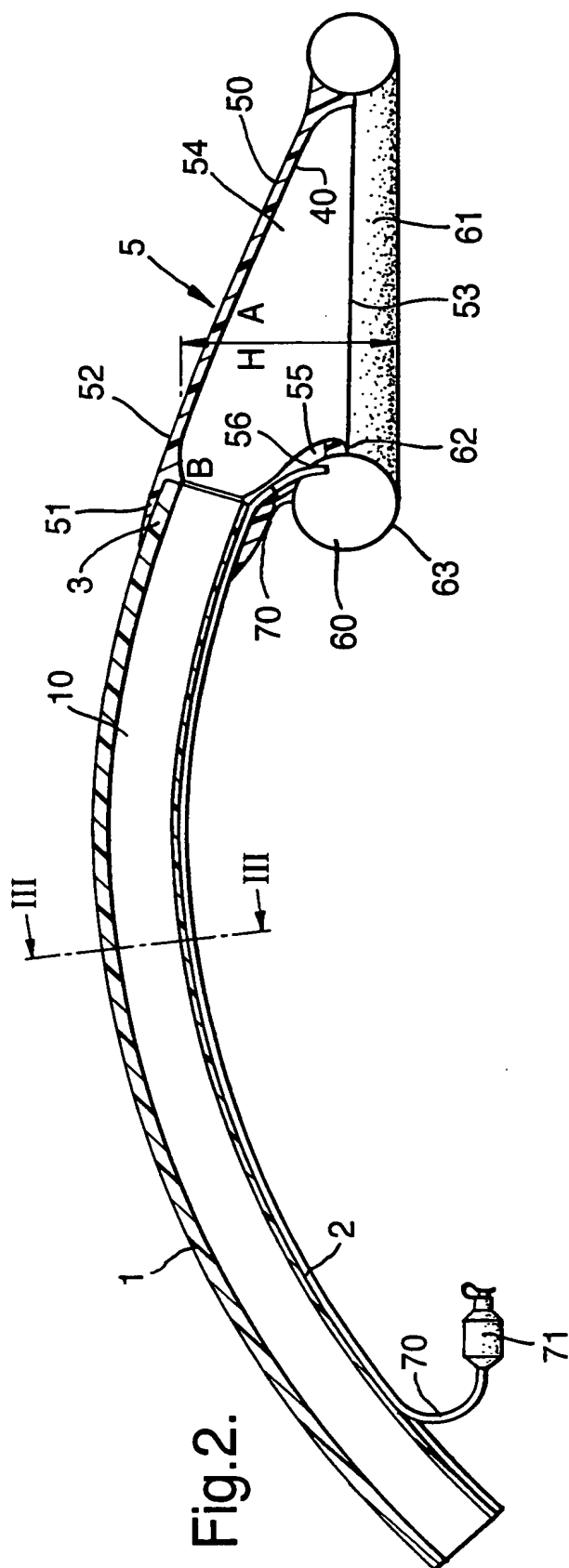


(57) Abstract: A laryngeal mask airway has a main tubular shaft (1) with a mask portion (5) attached at its patient end (3). The mask portion (5) comprises a mount (50) and a sealing cuff (60) attached to the mount. The interior of the mount (50) defines a large volume atrium (54) communicating with the bore of the shaft (1) at one end and with an opening (61) through the cuff (60) at its other end. The join between the shaft (1) and the mount (50) is located above the rear part (63) of the cuff (60). The height of the atrium (54) is between 2.5 and 3.5 the internal diameter of the shaft. The volume of the atrium (54) is such that the ratio of the internal diameter of the shaft cubed to the internal volume of the atrium is between 50 and 68.

WO 01/13980 A1

Fig.1.





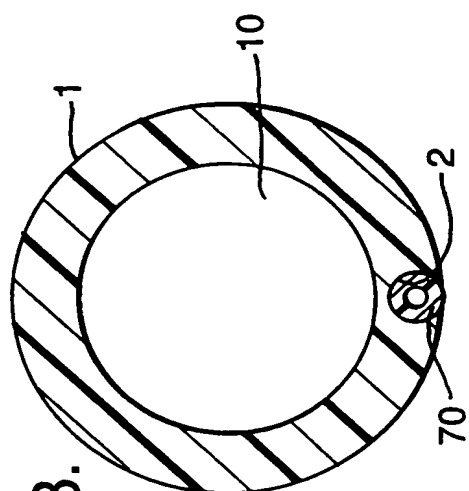


Fig. 3.

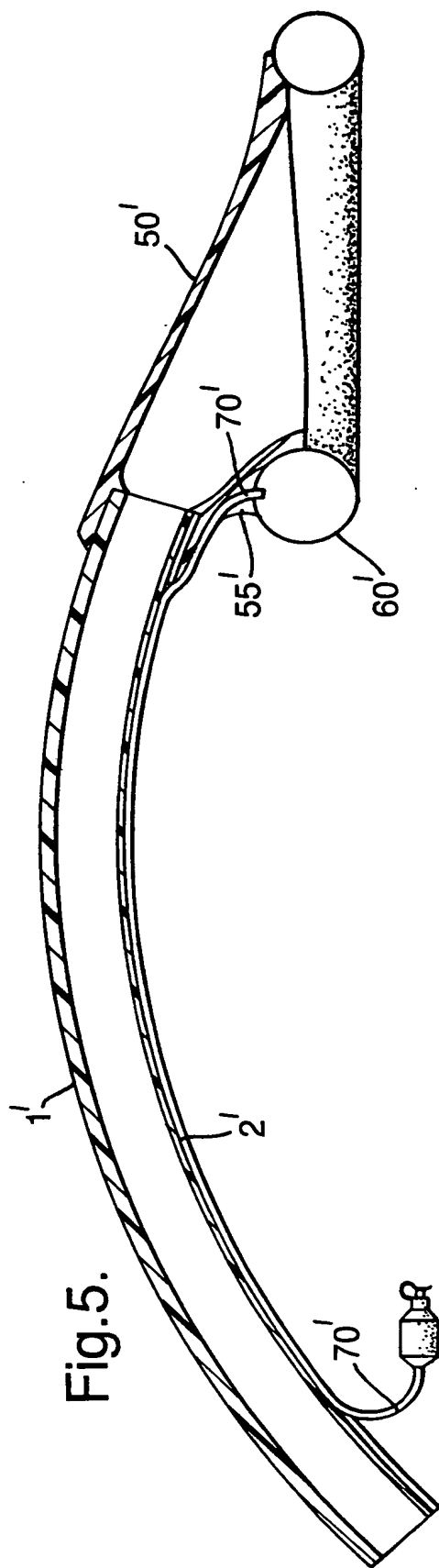


Fig. 5.

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB 00/03045

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61M16/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 323 289 A (SMITHS INDUSTRIES PLC) 23 September 1998 (1998-09-23) cited in the application page 3, paragraph 2; figure 2	1-5,7,8
A	---	6,9,10
X	US RE35531 E (CALLAGHAN ERIC B ET AL) 17 June 1997 (1997-06-17) column 2, line 17 - line 26; figure 5	1-4
A	---	6,9,10
X	GB 2 321 854 A (SMITHS INDUSTRIES PLC) 12 August 1998 (1998-08-12) cited in the application page 3, last paragraph -page 4, paragraph 1; figure 1	7,8
A	---	3,5,6,9, 10
	-/-	

☒ Further documents are listed in the continuation of box C.

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- "O" document referring to an oral disclosure, use, exhibition or other means
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Date of the actual completion of the international search

3 November 2000

Date of mailing of the international search report

10/11/2000

Name and mailing address of the ISA

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Authorized officer

Lakkis, A



# INTERNATIONAL SEARCH REPORT

Intern      1st Application No  
PCT/GB 00/03045

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Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 935 971 A (SMITHS INDUSTRIES PLC) 18 August 1999 (1999-08-18) cited in the application paragraph '0010!; figures	7,8
A	-----	3,5,6,9, 10
P,X	WO 00 20062 A (BRAIN ARCHIBALD IAN JEREMY) 13 April 2000 (2000-04-13) page 13, line 9 - line 15; figure 5	1-5,7,8
P,A	-----	6,9,10

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 00/03045

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
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			JP	10263083 A	06-10-1998
			US	6003514 A	21-12-1999
US RE35531	E	17-06-1997	US	5477851 A	26-12-1995
GB 2321854	A	12-08-1998	AU	5208398 A	13-08-1998
			EP	0857492 A	12-08-1998
			JP	10216233 A	18-08-1998
			US	6021779 A	08-02-2000
			ZA	9800334 A	27-07-1998
EP 0935971	A	18-08-1999	AU	1212099 A	02-09-1999
			GB	2334215 A	18-08-1999
WO 0020062	A	13-04-2000	AU	6113399 A	26-04-2000

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>9920098 M</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/GB 00/ 03045</b>	International filing date (day/month/year) <b>07/08/2000</b>	(Earliest) Priority Date (day/month/year) <b>26/08/1999</b>
Applicant  <b>SMITHS INDUSTRIES PUBLIC LIMITED COMPANY et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**LARYNGEAL MASK AIRWAY**

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

2

☐ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/03045

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EP0-Internal

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Fax: (+31-70) 340-3016

Authorized officer

Lakkis, A

## INTERNATIONAL SEARCH REPORT

International Application No

/GB 00/03045

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International Application No

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